

**SYSTEM AND METHOD USING THERMAL IMAGE ANALYSIS AND  
SLOPE THRESHOLD CLASSIFICATION FOR POLYGRAPH TESTING**

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**Abstract of the Invention**

Thermal image data of at least a region of a face of a person is provided. The thermal image data is transformed to blood flow rate data which includes a slope representative of the change of blood flow rate over time. The slope is compared to a slope threshold to determine a  
10 physiological state of the person. For example, it may be determined whether the person is deceptive or non-deceptive, e.g., deceptive with respect to an elicited response from the person.

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